



# INTERNSHIP PROJECT

Acmegrade(July-August)

PROJECT TITLE

Chatbot that helps one to book Railway Tickets

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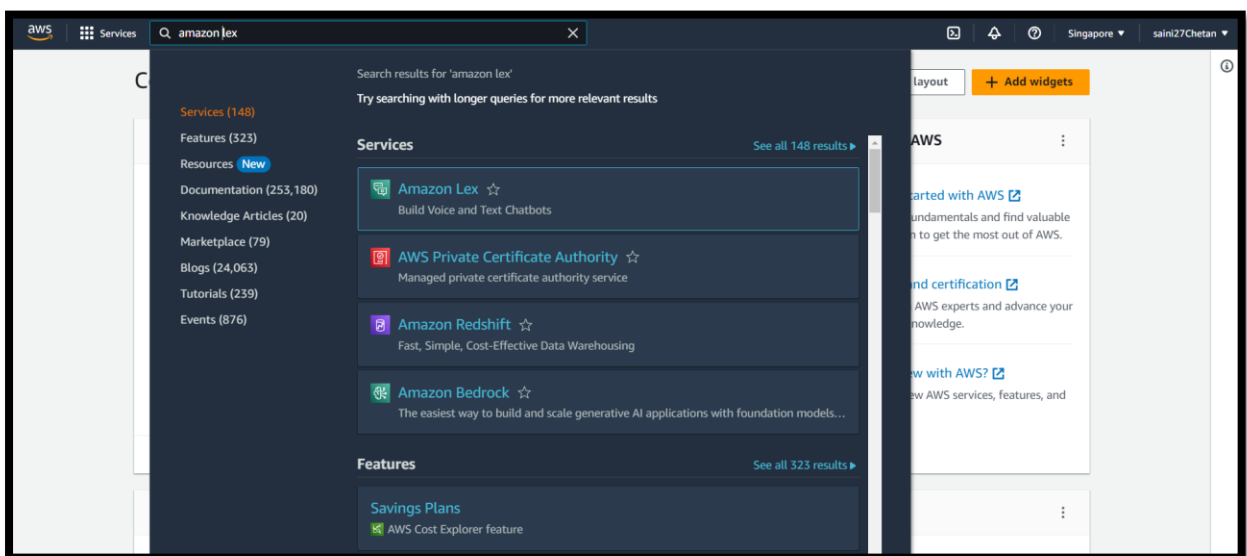
## Amazon Lex

Amazon Lex is a fully managed service that helps you build conversational interfaces for your applications. It uses natural language processing (NLP) and machine learning to understand what users are saying and respond in a natural way.

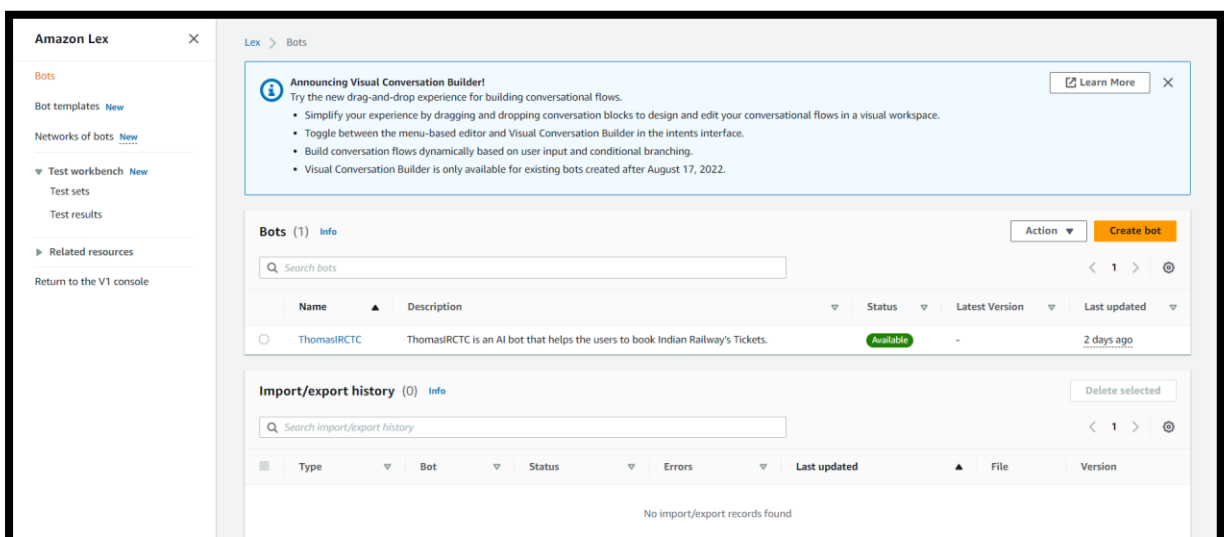
Amazon Lex is often used in various applications, including customer support chatbots, virtual assistants, and interactive voice response (IVR) systems. Developers can customize Lex to suit their specific use cases and integrate it into their existing applications to provide natural and engaging conversational experiences for users. Amazon Lex is a powerful tool that can be used to build conversational interfaces for a wide variety of applications. It is easy to use and scalable, making it a good choice for businesses of all sizes.

**AIM:** Create a Chatbot that helps you to book Railway Tickets (Follow Standard Railway Ticket process for General and Tatkal)

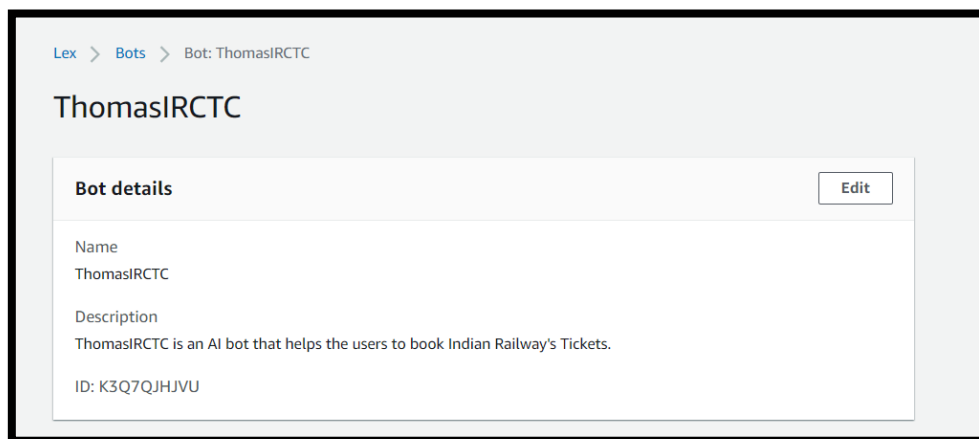
1. Visit AWS Console and search for Amazon Lex service



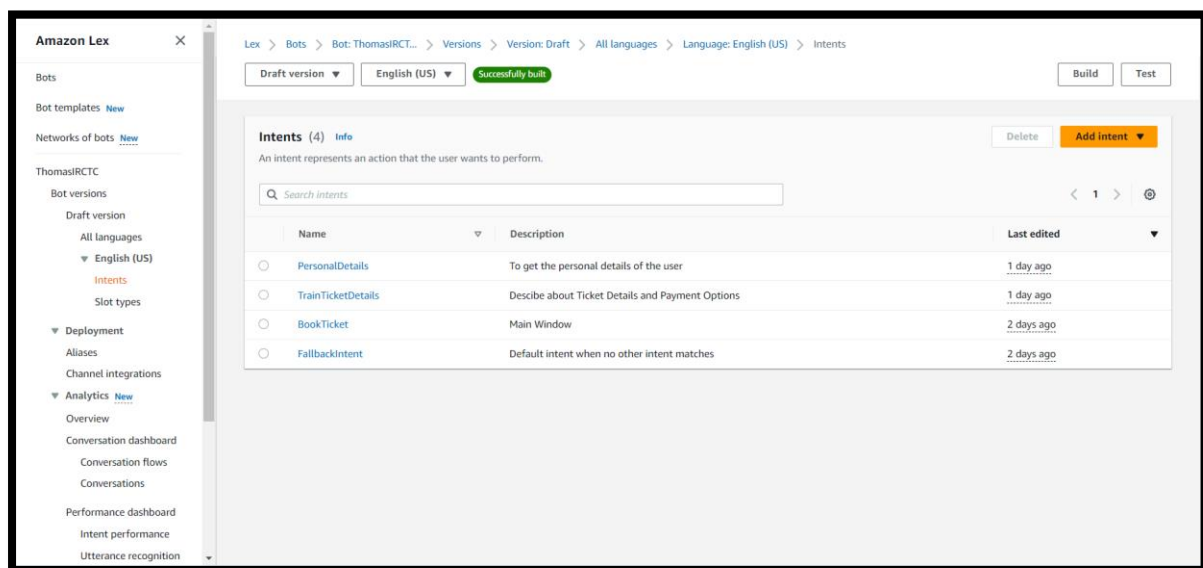
2. To create a bot, click on Create Bot button. I have created a chatbot named as “ThomasIRCTC” which helps the user to book their Railway Tickets in General and Tatkal Quota.



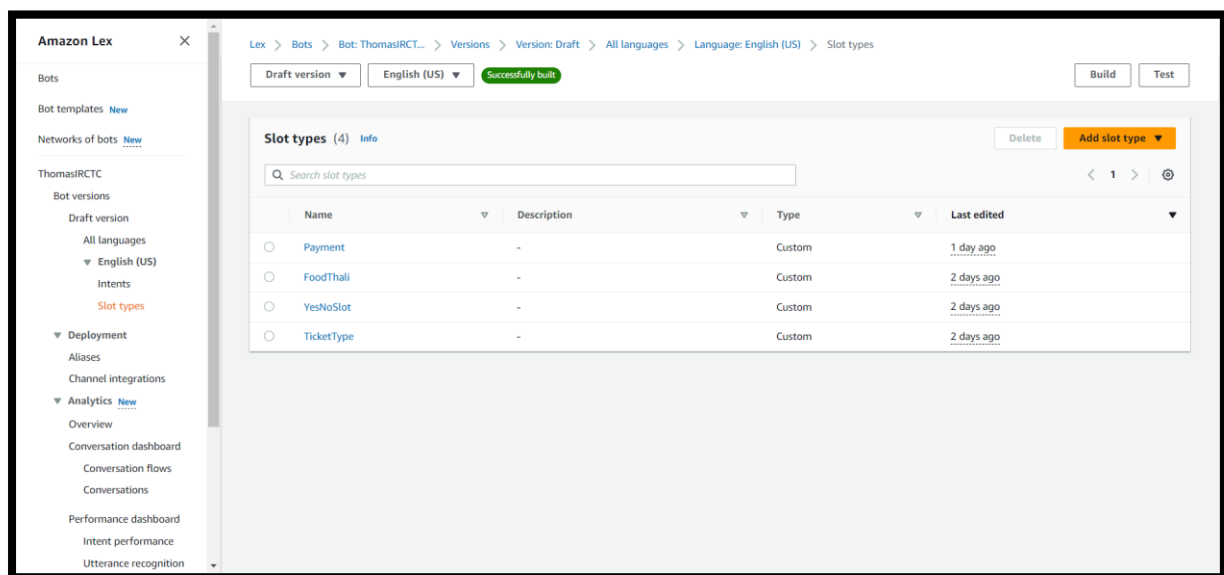
3. Here are details of the bot “ThomasIRCTC”.



4. List of Intents we have used for the respective chatbot

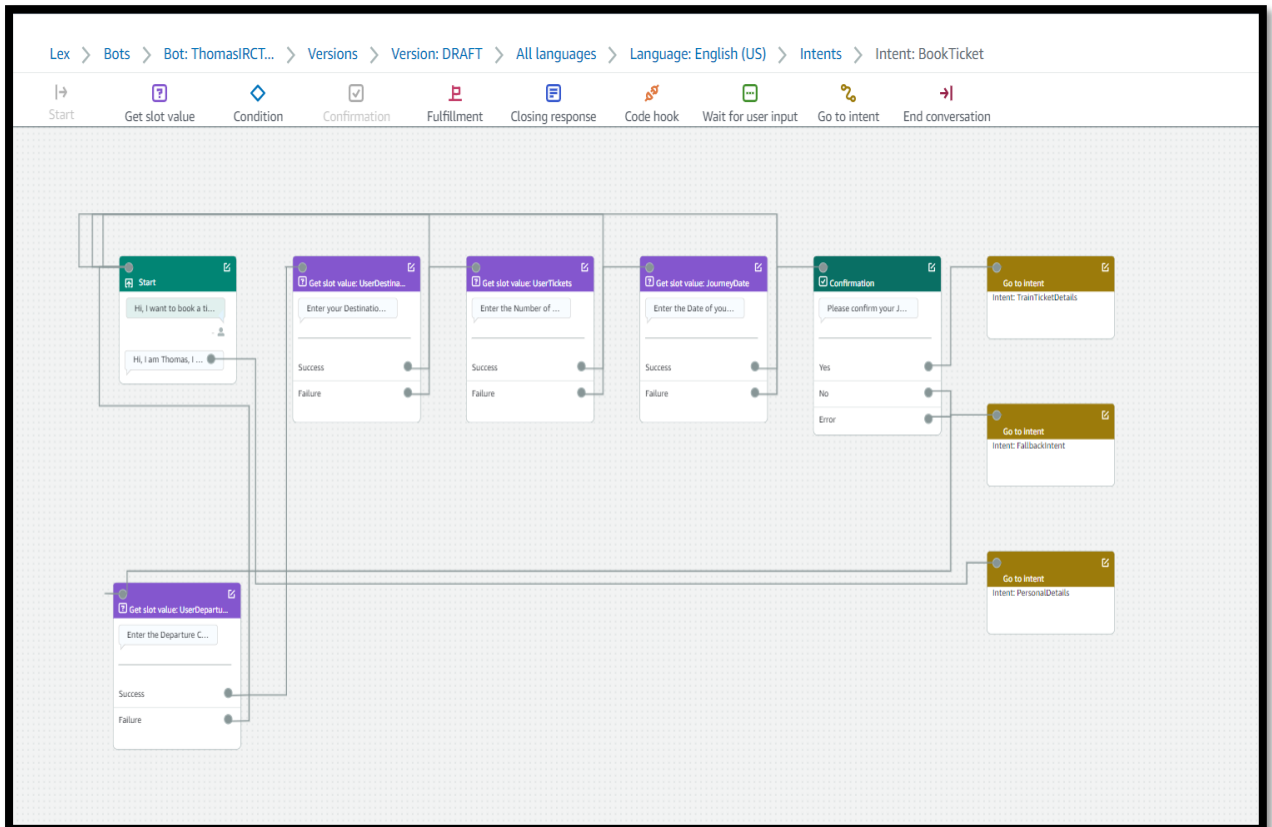


5. List of Slot Types used in the chatbot

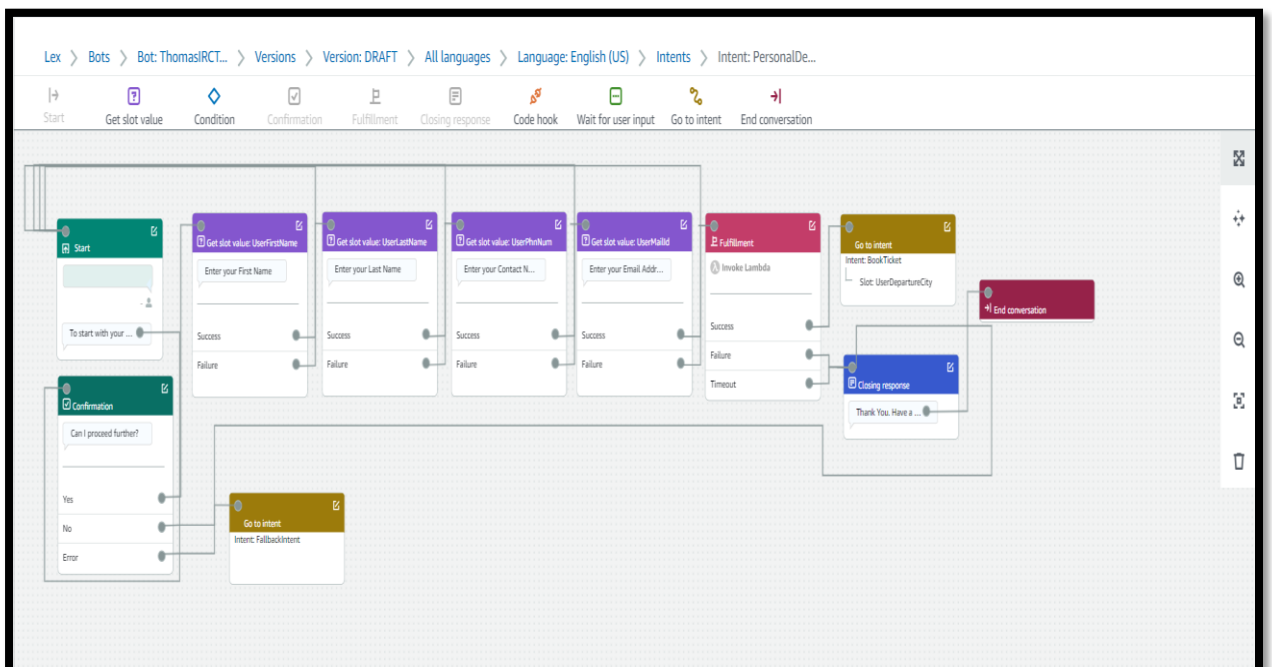


## 6. Visual Builder Representation of Intents used

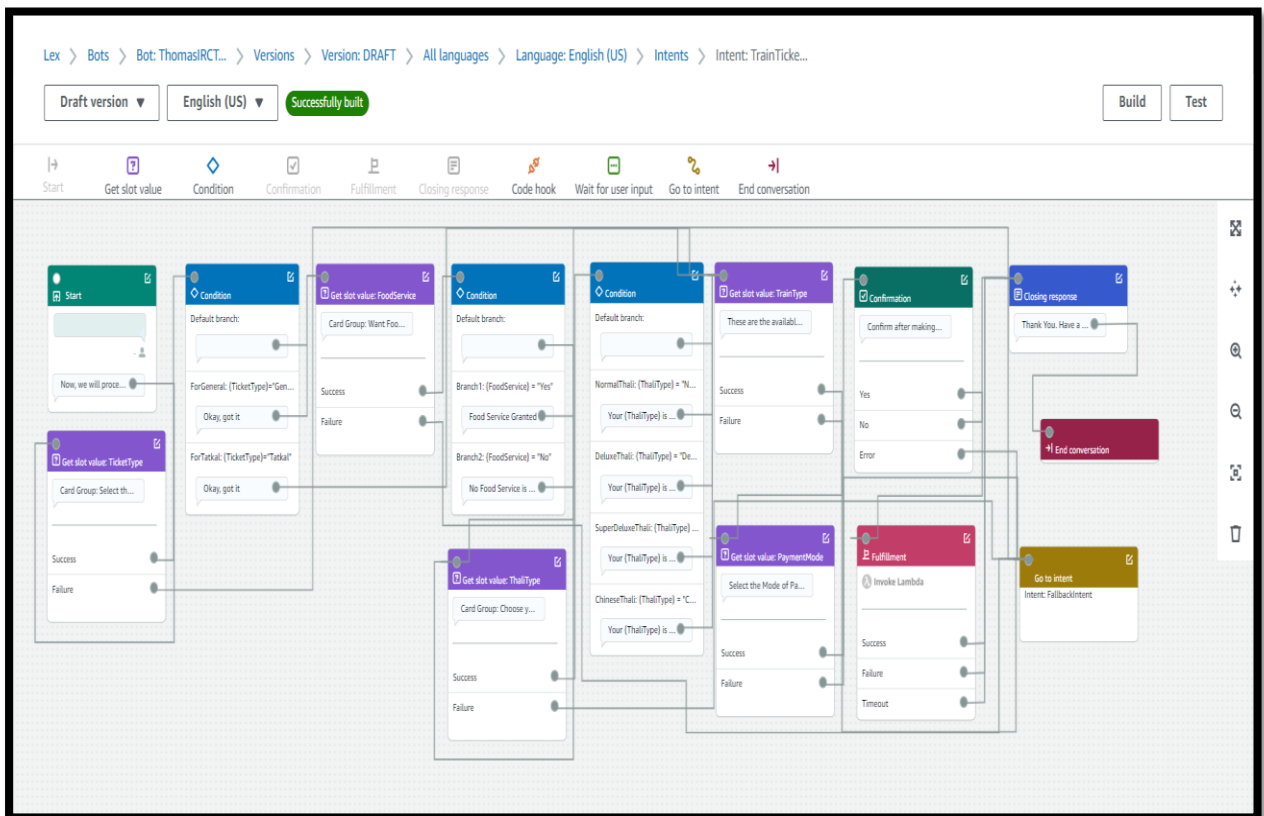
### a. BookTicket



### b. PersonalDetails



### c. TrainTicketDetails



## 7. Overview of all the built Slot Types

### a. Payment

### Slot type: Payment Info

A slot type is a list of values used to capture values for a slot.

#### Slot type details

#### Slot value resolution

Amazon Lex resolves the slot values in an utterance to only the values you provide, or it expands the resolution to related or similar values.

☐ Expand values (default)  
Values used as training data.

☒ Restrict to slot values  
Use only values provided.

#### Slot type values

Modify the list of values used to train the machine learning model to recognize values for a slot.

UPI	<div>upi X Tab or ; for new value X</div>
DebitCard	<div>Debit card X debit X debitcard X Tab or ; for new value</div>
Netbanking	<div>Net X NetBanking X Net Banking X netbanking X Tab or ; for new value</div>
CreditCard	<div>credit X CreditCard X Credit X creditcard X Tab or ; for new value</div>

b. FoodThali

### Slot type: FoodThali [Info](#)

A slot type is a list of values used to capture values for a slot.

► Slot type details

#### Slot value resolution

Amazon Lex resolves the slot values in an utterance to only the values you provide, or it expands the resolution to related or similar values.

☐ Expand values (default)  
Values used as training data.

☒ Restrict to slot values  
Use only values provided.

#### Slot type values

Modify the list of values used to train the machine learning model to recognize values for a slot.

<input type="text" value="NormalThali"/>	<input type="text" value="Tab or ; for new value"/>	×
<input type="text" value="DeluxeThali"/>	<input type="text" value="Tab or ; for new value"/>	×
<input type="text" value="SuperDeluxeThali"/>	<input type="text" value="Tab or ; for new value"/>	×
<input type="text" value="ChineseThali"/>	<input type="text" value="Tab or ; for new value"/>	×

Add value

Maximum 140 characters. Valid characters: A-Z, a-z, 0-9, @, #, \$

☐ Use slot values as custom vocabulary [Info](#)

c. YesNoSlot

### Slot type: YesNoSlot [Info](#)

A slot type is a list of values used to capture values for a slot.

► Slot type details

#### Slot value resolution

Amazon Lex resolves the slot values in an utterance to only the values you provide, or it expands the resolution to related or similar values.

☐ Expand values (default)  
Values used as training data.

☒ Restrict to slot values  
Use only values provided.

#### Slot type values

Modify the list of values used to train the machine learning model to recognize values for a slot.

<input type="text" value="Yes"/>	<div><input type="text" value="yes"/> × <input type="text" value="YES"/> × <input type="text" value="y"/> × <input type="text" value="Y"/> ×</div> <div>Tab or ; for new value</div>	×
<input type="text" value="No"/>	<div><input type="text" value="NO"/> × <input type="text" value="no"/> × <input type="text" value="n"/> × <input type="text" value="N"/> ×</div> <div>Tab or ; for new value</div>	×

Add value

Maximum 140 characters. Valid characters: A-Z, a-z, 0-9, @, #, \$

☒ Use slot values as custom vocabulary [Info](#)

#### d. TicketType

### Slot type: TicketType [Info](#)

A slot type is a list of values used to capture values for a slot.

**Slot type details**

#### Slot value resolution

Amazon Lex resolves the slot values in an utterance to only the values you provide, or it expands the resolution to related or similar values.

☐ Expand values (default)  
Values used as training data.

☒ Restrict to slot values  
Use only values provided.

#### Slot type values

Modify the list of values used to train the machine learning model to recognize values for a slot.

general ✕ GENERAL ✕

Tab or ; for new value

tatkal ✕ TATKAL ✕

Tab or ; for new value

Maximum 140 characters. Valid characters: A-Z, a-z, 0-9, @, #, \$

☒ Use slot values as custom vocabulary [Info](#)

#### 8. Test Draft on Local Platform

Hi, I want to book tickets

Hi, I am Thomas, I will help you to book ticket(s) for you.

To start with your Reservation, I will need your Personal Details

Can I proceed further?

Yes

Ready for complete testing

Thank you for the confirmation

Enter your First Name

Chetan

Okay, got it

Enter your Last Name

Saini

✔ Ready for complete testing

🎤 Type a message

Okay, got it

Enter your Contact Number

8745963210

Okay, got it

Enter your Email Address

chetan@gmail.com

✔ Ready for complete testing

🎤 Type a message

Okay, got it.

We got all your Personal Details.

Now, Chetan Saini, Enter your Journey Details.

Enter the Departure City.

DELHI

Okay, got it

✔ Ready for complete testing

🎤 Type a message



Enter your Destination City

PUNE


Okay, got it

Enter the Number of Ticket(s) you want

4

Okay, got it

✓ Ready for complete testing

 Type a message

Enter the Date of your Journey

12-11-23


Okay, got it

Please confirm your Journey Details

4 ticket(s) from DELHI to PUNE on 2023-12-11

Yes

✓ Ready for complete testing

 Type a message

Thanks for your confirmation


Now, we will proceed further with type of Ticket you want to reserve

Select the Ticket Type

General

Tatkal

✓ Ready for complete testing

 Type a message

General


Tatkal

General

Okay, got it

For General Ticket(s), IRCTC is providing Food Services

✓ Ready for complete testing

 Type a message


Want Food Service or Not?

YES

NO

Yes

✓ Ready for complete testing

 Type a message

Choose your Food Thali


Normal Thali  
(₹100)

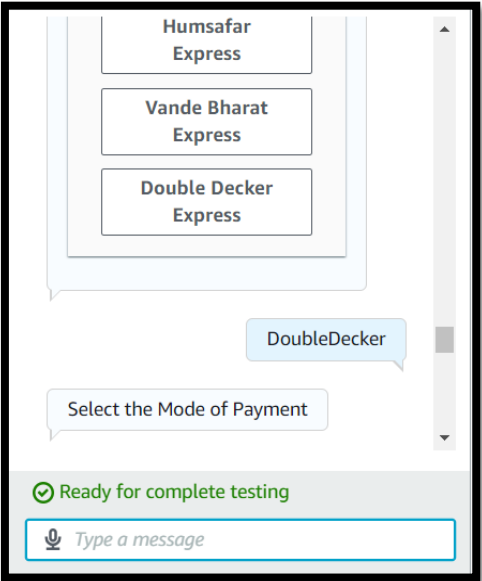
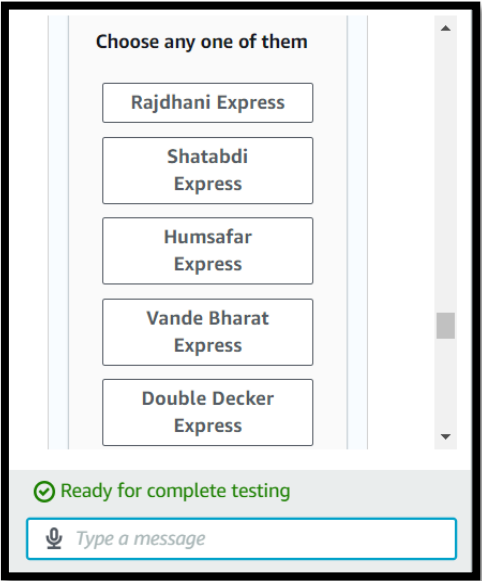
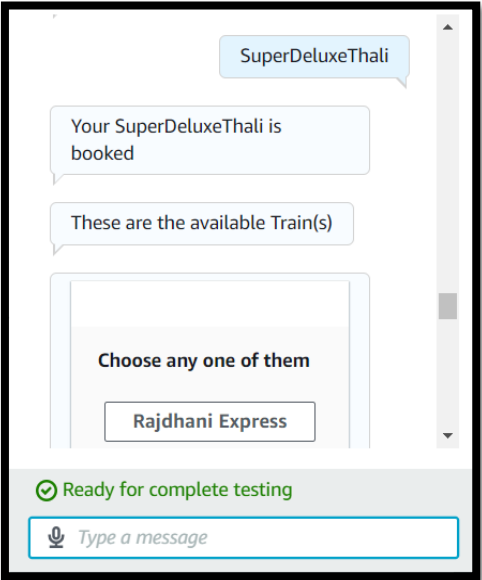
Deluxe Thali  
(₹150)

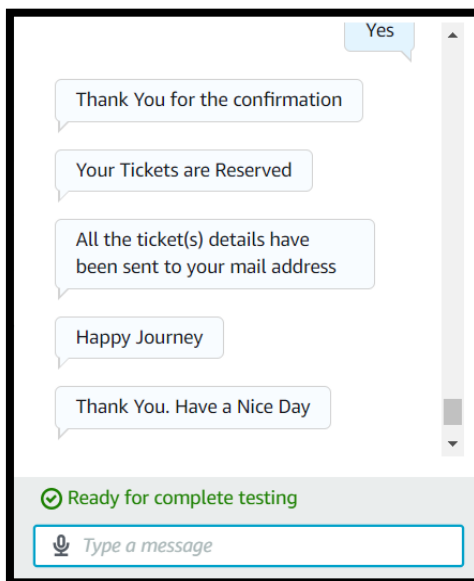
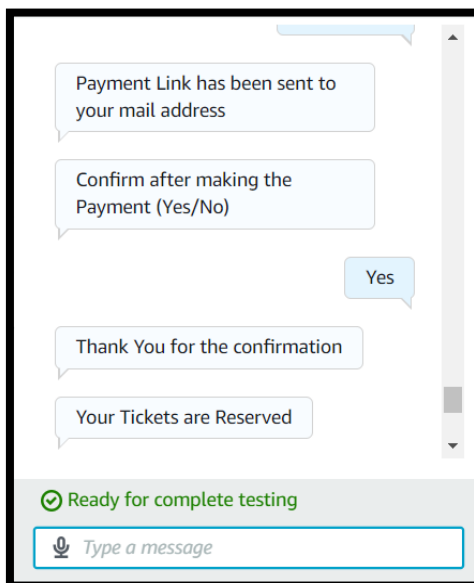
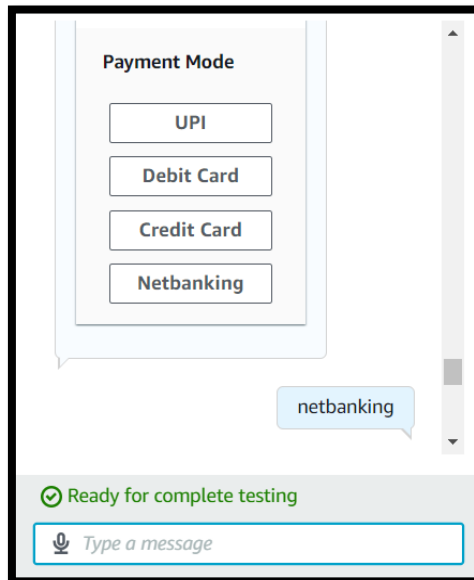
Chinese Thali  
(₹170)

Super Deluxe Thali (₹200)

✓ Ready for complete testing

 Type a message

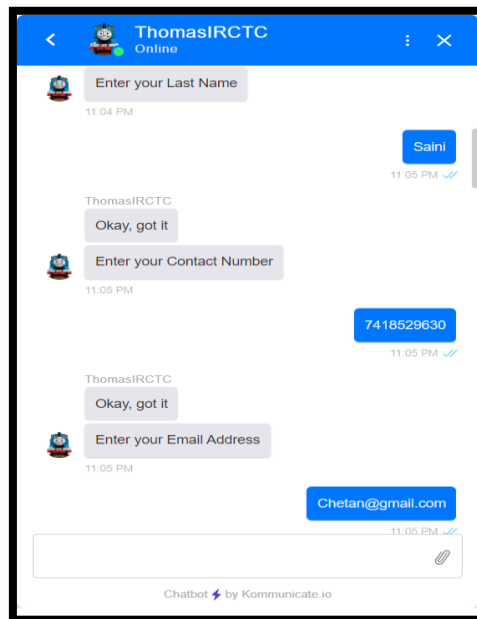
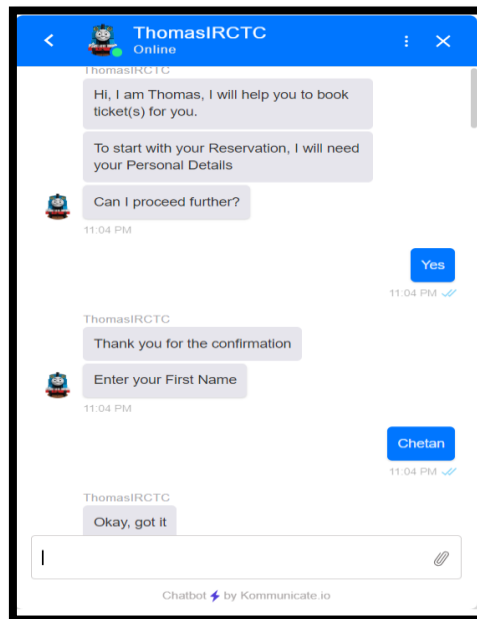


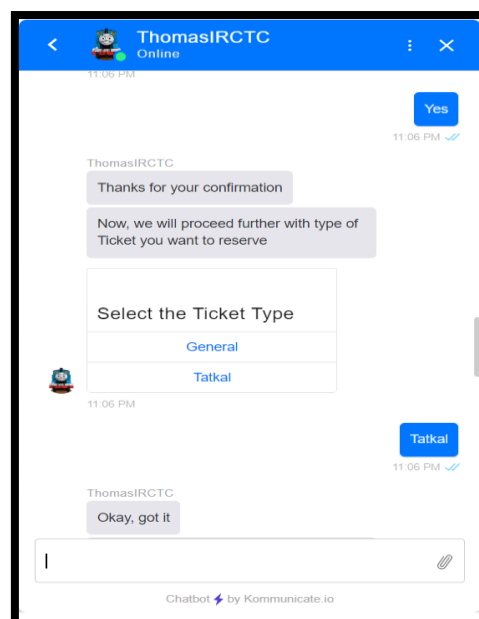
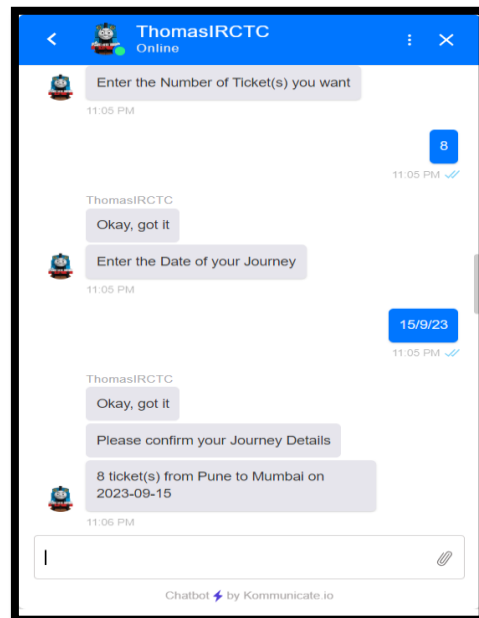
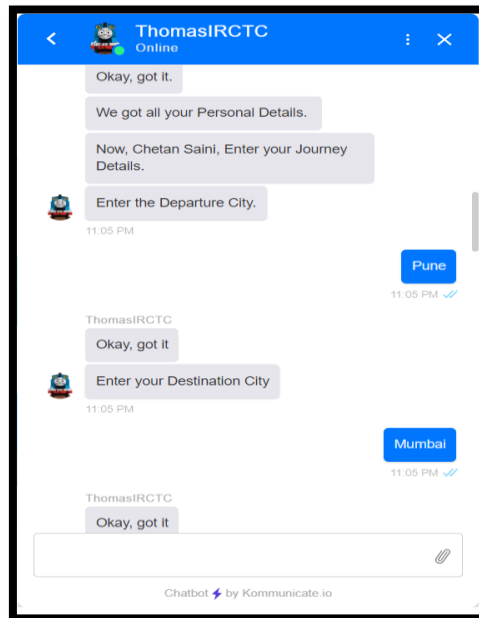


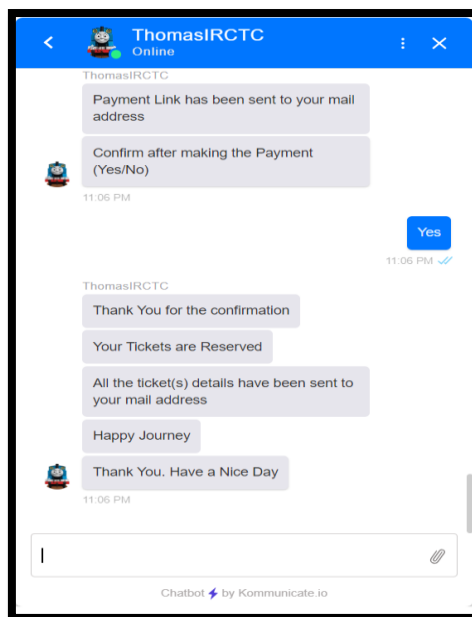
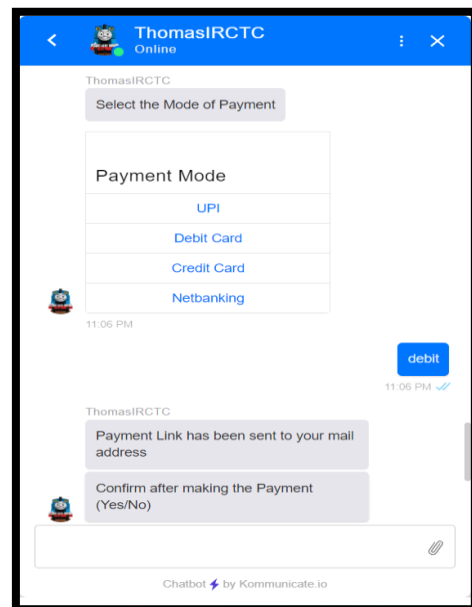
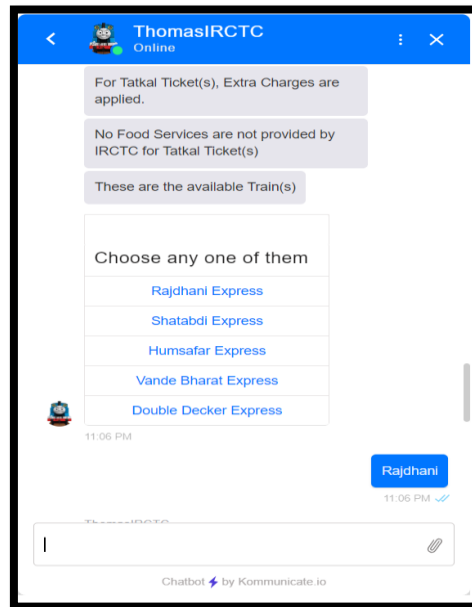
9. Integrated with kommunicate to make the chatbot more attractive.

(<https://www.kommunicate.io/>)

To integrate the chatbot with kommunicate, I have used the root user's access key. Access key can be generated by going in Security Credential tab







I hope you like my work and I am grateful of you that you have given me this opportunity.